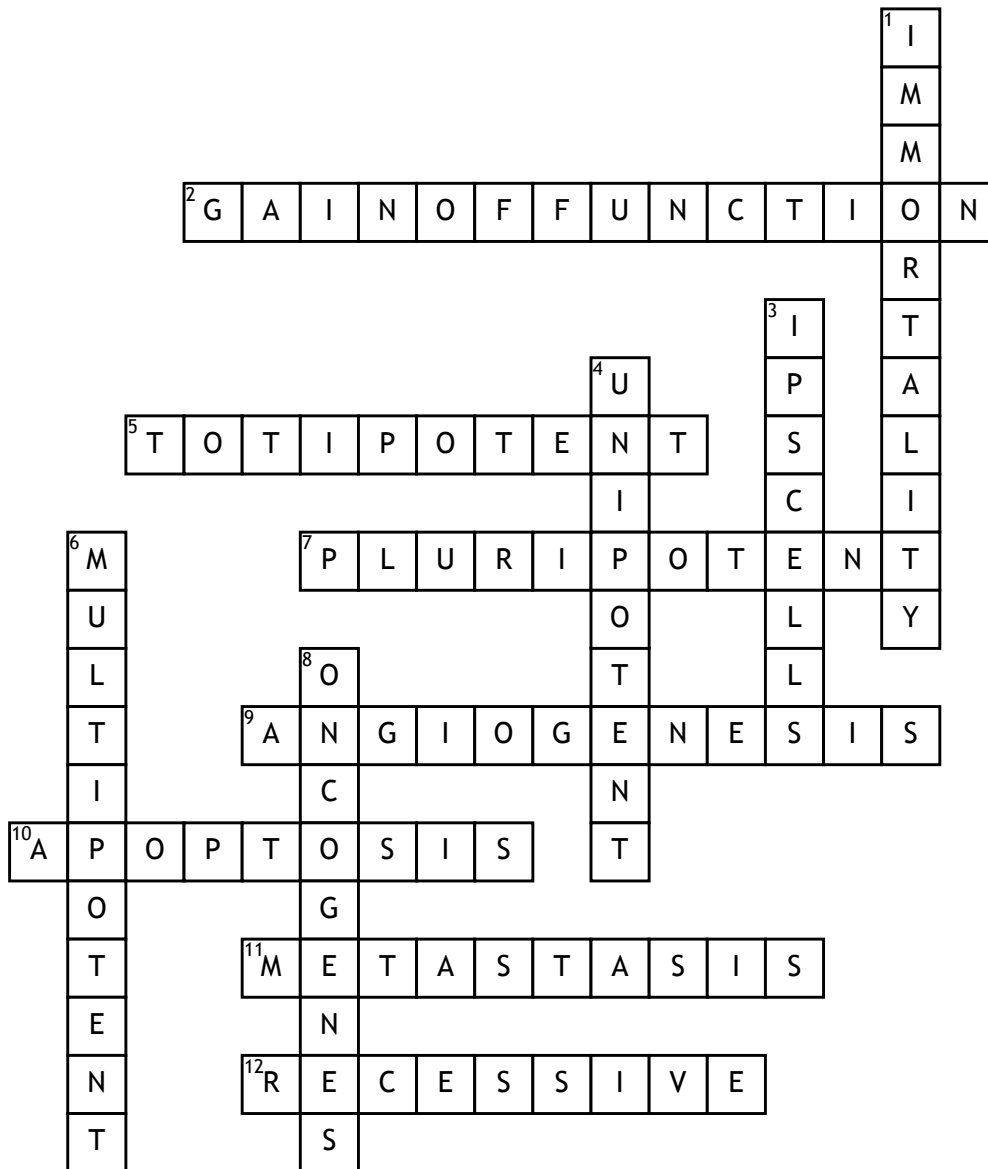


Name: \_\_\_\_\_

Date: \_\_\_\_\_

# Cancer and Stem cells



## Across

2. Mutation that turns proto-oncogenes to oncogenes
5. Cell that has the ability to produce all of the differentiated cells in an organism
7. Cell that can give rise to any fetal or adult cell type except those of extra-embryonic tissues
9. Formation of blood vessels to provide oxygen and nutrients to the growing tumor

10. This pathway must be bypassed by cancer cells which gives them the abnormal ability to survive stress and DNA damage
11. Caused by invasion of the extracellular matrix, vascular dissemination, homing of tumor cells and colonization
12. Tumor suppressor genes control cell cycle progression and this mutated state is needed to bypass their function

## Down

1. Created by cells going into senescence and maintaining telomere length through induction of telomerase
3. Turning any cell into a stem cell to then turn it back to specific types of cells
4. Cell that can give rise to only one type of differentiated cell
6. Cell that can give rise to multiple lineages
8. Mutated versions of proteins involved in transmitting cellular growth-promoting signals